(MYOCARDIAL (INCLUDING HYPERTROPHY)PERICARDIAL DISEASE)

36. Anesthesia for high risk patients undergoing percutaneous mitral valve repair with the mitraclip system in the catheterization laboratory

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MitraClip system implantation is used inhigh-risk patients with severe mitral regurgitation.anesthetic management for mitral clip implantation. The study included 34patients scheduled for MitraClip implantations in the catheterization laboratory. An arterial line and central venous line were inserted under local anesthesia before induction. Epinephrine was started before induction and milrinone infusion was started after induction. The anesthetic technique for induction and maintenance was the same for all patients. All patients were hemodynamically stable intra- and postoperatively. The intervention was successful in 33 cases and aborted in one case because of severe posteromedial leaflet tethering. The epinephrine and milrinone were weaned and all patients were extubated, except, one case mortality happened within the first 8 hours postoperatively. Percutaneous mitral valve repair with MitraClip implantation is a successful alternative in high-risk patients with symptomatic severe mitral regurgitation. Starting epinephrine before anesthetic induction and milrinone infusion induction resulted in decreased pulmonary artery pressure, increased ejection fraction and maintained arterial blood pressure during procedure inspite of worse preoperative conditions.

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Intervention and surgery

(MYOCARDIAL PROTECTION, INTRAOPERATIVE MANAGEMENT, AND POSTOPERATIVE CRITICAL CARE)

37. Conventional hemofiltration during cardiopulmonary bypass increases the serum lactate level in adult cardiac surgery

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To evaluate the effect of hemofiltration on lactate level in adult patients undergoing cardiac surgery. Hemofiltration increases the lactate level. The study included 283 patients classified into two groups: Hemofiltration group ($n = 138$), hemofiltration was done during CPB. Control group ($n = 145$), patients without hemofiltration. The lactate elevated in group H than group C ($P < 0.05$), and the PH showed metabolic acidosis in group H ($P < 0.05$). The mixed venous oxygen saturation decreased in group H than group C ($P < 0.05$). The number of transfused packed red blood cells was lower in group H than group C ($P < 0.05$). The hematocrit was higher in group H than group C ($P < 0.05$). The urine output was lower in group H than group C ($P < 0.05$). Hemofiltration leads to hemoconcentration, elevated lactate level and increased inotropic support. There are some recommendations for hemofiltration: First; Hemofiltration should be limited for patients with impaired renal function, positive fluid balance, reduced response to diuretics or prolonged bypass time more than 2 hours. Second; Minimal amount of fluids should be administered to maintain adequate cardiac output and reduction of priming volumes is preferable to maintain controlled hemodilution.Third; it should be done before weaning of or after cardiopulmonary bypass and not during the whole time of cardiopulmonary bypass.

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Lifestyle risk factors and behavior change

(CLINICAL RISK FACTORS AND BIOMARKERS IN RISK PREDICTION)

38. Diastolic function is an independent predictor of cardiorespiratory fitness in patients with preserved ejection fraction

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The aim of this analysis is to determine whether diastolic dysfunction is an independent predictor of CRF among patients with normal left ventricular function. Cardiorespiratory fitness (CRF), expressed in metabolic equivalent (METs), has been shown to be a significant predictor of outcomes. A retrospective analysis including patients who underwent clinically indicated treadmill stress testing using Bruce protocol and transthoracic echocardiography within one-year period between 2008 and 2014. Cardiorespiratory fitness was estimated using the maximum speed and grade achieved during treadmill time. Multivariable Linear regression was used to determine the independent predictors of CRF. Results: A total of 2816 patients (Mean age 46 ± 12 years, 61% were males) were included. The prevalence of risk factors were: hypertension 23.6%, diabetes mellitus 18.2% and dyslipidaemia 57.6%. The distribution of the diastolic dysfunction across the different CRF groups are shown. Using multivariate logistic regression, the independent predictors of poor CRF (achieving less than 6 METS) included diastolic dysfunction OR 1.87 (95% CI, 1.326–2.518), $p < 0.001$ and BMI (OR 0.907, (95% CI, 0.895–0.918), $p < 0.001$ per 1 kg/m^2) after adjusting for potential confounders.Among patients with normal left ventricular function, diastolic function assessment is an independent predictor of cardiorespiratory fitness.

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